

## AMENDMENTS TO THE CLAIMS

Cancel Claims 1-25, 27-28 and 36 without prejudice. Please accept amended Claims 26, 34, and 37 as follows:

1-25. (Canceled)

26. (Currently Amended) A method for constructing an antenna, the method comprising the steps of:

providing a substrate having a first surface and a second surface, the first and second surfaces defining planes that are substantially parallel; ~~and~~

forming a conductive via stub in the substrate ~~between~~ extending from the first surface and to the second surface, wherein the conductive via stub is a radiating element of the antenna, the conductive via stub having a first diameter exposed at the first surface and a second diameter exposed at the second surface, the second diameter being greater than the first diameter; and

a ground plane disposed on the first surface having an opening surrounding the conductive via stub and a contact pad disposed on the conductive via stub within the opening.

27-28. (Canceled)

29. (Previously Presented) The method of claim 26, further comprising:  
depositing a second conductive layer on the second surface of the substrate; and  
patterning the second conductive layer to form a hat element that is electrically connected to an end portion of the conductive via stub.

30. (Previously Presented) The method of claim 28, further comprising:  
depositing an insulation layer over the patterned first conductive layer;  
depositing a third conductive layer over the insulation layer; and  
patterning the third conductive layer to form one or more contact pads, transmission lines, or both.

31. (Previously Presented) The method of claim 30, further comprising forming a plurality of grounding vias in the insulation layer, the grounding vias being electrically connected to the ground plane.

32. (Previously Presented) The method of claim 31, further comprising forming a solder ball on each grounding via and on one or more contact pads or transmission lines of the patterned third conductive layer.

33. (Previously Presented) The method of claim 32, further comprising bonding the antenna to an IC chip using one or more of the solder balls.

34. (Currently Amended) A method for constructing an integrated communications apparatus, comprising the steps of:

providing an antenna, the antenna comprising a substrate and a conductive via stub formed in the substrate, wherein the conductive via stub is a radiating element;

forming an interposer device, wherein forming an interposer device comprises

depositing an insulation layer over the substrate of the antenna having the ground plane;

depositing a conductive layer over the insulation layer;

patterning the conductive layer to form one or more contact pads, transmission lines, or both;

forming a plurality of grounding vias in the insulation layer, the grounding vias being electrically connected to the ground plane; and

forming a feeding via in the insulation layer, the feeding via being electrically connected to the conductive via stub; and

connecting an IC (integrated circuit) chip to the antenna using the interposer device.

35. (Previously Presented) The method of claim 34, wherein the antenna further comprises a ground plane formed on a surface of the substrate.

36. (Canceled)

37. (Currently Amended) The method of claim ~~36~~ 34, further comprising forming a solder ball on each grounding via and on one or more contact pads or transmission lines of the patterned third conductive layer.

38. (Previously Presented) The method of claim 37, wherein the step of connecting an IC chip to the antenna using the interposer device comprises bonding the antenna to the IC chip using one or more of the solder balls.